

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-007518**Date Inspected:** 13-Jun-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Le Feng, Liu Yang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** TOWER**Summary of Items Observed:**

The Caltrans (CT) Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

**Outside Yard at Vertical Mill:**

The QA Inspector randomly observed that vertical mill was idle and that no milling was being performed in either Lift 1 East or Lift 2 East.

The QA Inspector randomly observed that no contract work was being performed in the interiors or on the exteriors of Lift 2 East Tower Shaft or Lift 2 South Tower Shaft.

The QA Inspector randomly observed ZPMC welders Zhang Xiang Rong ID 066763, Xu Hua ID 049220 and Huang Guo Qi ID 059525, utilizing the Flux Cored Arc Welding (FCAW) Process with ZPMC Weld Procedure Specification (WPS) WPS-345-FCAW-2G (2F)-Repair in 2F (Horizontal Fillet) Position and WPS-345-FCAW-3G (3F)-Repair in the 3F (Vertical Fillet) Position, to deposit weld metal to the ends of the Longitudinal Stiffeners and Skin Plates A, B, C, D and E on the base of Lift 1 East Tower Shaft.

**Heavy Equipment Shop Bay 10:**

The QA Inspector randomly observed ZPMC welder Hua Gui Mei ID 050295, utilizing the Submerged Arc

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Welding (SAW) Process in the 1G (Flat Groove) Position with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2221-C-U2b-S-2 to weld the long seam between Skin Plate A and Skin Plate E on Lift 2 North Tower Shaft at Weld Joint (WJ) NSD1-TL8B/L-1A. The QA Inspector randomly observed ZPMC Quality Control monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Lu Hai Xian ID 040252, utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2221-C-U2b-S-2 to weld the long seam between Skin Plate A and Skin Plate E on Lift 2 North Tower Shaft at WJ NSD1-TL8B/L-1A. The QA Inspector randomly observed ZPMC Quality Control monitoring only interpass temperature and not recording any data. The QA Inspector randomly verified the weld parameters of Ms. Lu. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Liu Xiao Yan ID 207745, utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2221-C-U2b-S-2 to weld the long seam between Skin Plate A and Skin Plate E on Lift 2 North Tower Shaft at WJ NSD1-TL8B/L-1A. The QA Inspector randomly observed ZPMC Quality Control monitoring only interpass temperature and not recording any data. The QA Inspector randomly verified the weld parameters of Ms. Liu. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Xu Kao Zhen ID 051413, utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2221-C-U2b-S-2 to weld the long seam between Skin Plate A and Skin Plate E on Lift 2 North Tower Shaft at WJ NSD1-TL8B/L-1A. The QA Inspector randomly observed ZPMC Quality Control monitoring only interpass temperature and not recording any data. The QA Inspector randomly verified the weld parameters of Ms. Liu. Weld parameters appeared to comply with contract requirements.

The QA Inspector performed a 100% VT Inspection and 15% Magnetic Particle Testing (MT) Verification of the welds attaching doubler plates to Lift 2 North Tower Shaft Skin Plate A per ZPMC NDT Notification Sheet 003403. The QA Inspector visually observed several areas which required grinding and one area in the cutout at WJ NSD1-SA166B/F-1 which required grinding to remove several mm of aligned slag pockets and then welding to fill the excavation. There appeared to be no indications after the re-work and the QA Inspector accepted the above listed welds. The attached photographs provide additional detail.

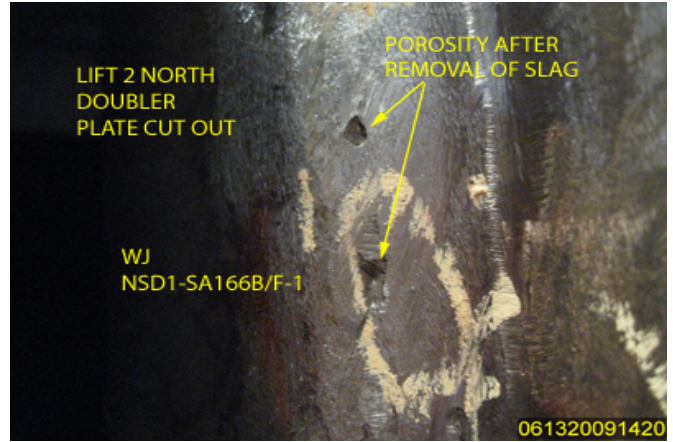
Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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## Summary of Conversations:

No relevant conversations.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod 13482570045, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Franco,Charlie	Quality Assurance Inspector
<b>Reviewed By:</b>	Clifford,William	QA Reviewer

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